

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-30. (Cancelled)

31. (Currently Amended): A method for modulating inhibiting an immune response comprising administering to a human in need thereof a purified compound selected from the group consisting of an antibody, an alpha (2) macroglobulin fragment, and an alpha (2) macroglobulin receptor fragment, which compound interferes with the interaction of a heat shock protein with the alpha (2) macroglobulin receptor, and is in an amount effective to modulate inhibit the immune response of said human.

32-70. (Cancelled)

71. (Currently Amended): A method for inhibiting an immune response comprising administering to a human in need thereof a purified compound selected from the group consisting of an antibody and an alpha (2) macroglobulin fragment, which compound binds to the alpha (2) macroglobulin receptor, in an amount effective to inhibit the immune response of said human.

72-75. (Cancelled)

76. (Previously Presented): The method of claim 31 or 71 wherein the compound is an antagonist which decreases alpha (2) macroglobulin receptor activity.

77. (Previously Presented): The method of claim 31 wherein the compound is an antibody specific for alpha (2) macroglobulin.

78. (Currently Amended): The method of claim 31 or 71 wherein the compound is an antibody specific for the alpha (2) macroglobulin receptor.

79. (Currently Amended): The method of claim 31 wherein the compound is an antibody specific for the ~~first~~ heat shock protein.

80. (Currently Amended): The method of claim 31, wherein the ~~first~~ heat shock protein is gp96.

81. (Currently Amended): The method of claim 31 wherein the ~~first~~ heat shock protein is Hsp70.

82. (Currently Amended): The method of claim 31 wherein the ~~first~~ heat shock protein is Hsp90.

83. (Cancelled)

84. (Previously presented): The method of claim 31 or 71, wherein the compound is a peptide.

85. (Currently Amended): The method of claim 31 or 71, wherein the immune response is to an autoimmune antigen.

86 - 90. (Cancelled)

91. (Previously presented): The method of claim 85, wherein the autoimmune antigen is of: insulin dependent diabetes mellitus, multiple sclerosis, systemic lupus erythematosus, Sjogren's syndrome, scleroderma, polymyositis, chronic active hepatitis, mixed connective tissue disease, primary biliary cirrhosis, pernicious anemia, autoimmune thyroiditis, idiopathic Addison's disease, vitiligo, gluten-sensitive enteropathy, Graves' disease, myasthenia gravis, autoimmune neutropenia, idiopathic thrombocytopenia purpura, rheumatoid arthritis, cirrhosis, pemphigus vulgaris, autoimmune infertility, Goodpasture's disease, bullous pemphigoid, discoid lupus, ulcerative colitis, or dense deposit disease.

92. (Currently amended): The method of claim 31 or 71 wherein the compound ~~comprises is selected from the group consisting of~~ a polyclonal antibody, monoclonal antibody, humanized antibody, chimeric antibody, single chain antibody, Fab fragment, F(ab')₂ fragment, fragment produced by a Fab expression library, ~~or and~~ anti-idiotypic antibody.

93. (Currently amended): The method of claim 31 or 71 wherein the compound ~~comprises~~ is selected from the group consisting of an epitope-binding fragment of a polyclonal antibody, monoclonal antibody, humanized antibody, chimeric antibody, single chain antibody, Fab fragment, F(ab')₂ fragment, fragment produced by a Fab expression library, or and anti-idiotypic antibody.

94. (New) The method of claim 31 or 71, wherein the compound is an α 2M fragment comprising at least five consecutive amino acids of α 2M (SEQ ID NO.: 4).

95. (New) The method of claim 31 or 71, wherein the compound is a peptide consisting of amino acids selected from the group consisting of: 1299-1451 (SEQ ID NO:8), 1314-1451 (SEQ ID NO:9), 1366-1392 (SEQ ID NO:10), 1300-1425 (SEQ ID NO:11), 1300-1400 (SEQ ID NO:12), 1300-1380 (SEQ ID NO:13), 1325-1425 (SEQ ID NO:14), 1325-1400 (SEQ ID NO:15), 1325-1380 (SEQ ID NO:16), 1350-1425 (SEQ ID NO:17), 1350-1400 (SEQ ID NO:18), and 1350-1380 (SEQ ID NO:19).

96. (New) The method of claim 31, wherein the compound is an α 2M receptor fragment comprising at least five consecutive amino acids of the α 2M receptor (SEQ ID NO.: 7).

97. (New) The method of claim 31, wherein the α 2M receptor fragment comprises at least one complement repeat selected from the group consisting of CR3 to CR10.

98. (New) The method of claim 31, wherein the α 2M receptor fragment comprises a cluster of complement repeats.

99. (New) The method of claim 98, wherein the cluster of complement repeats comprises the CI-CII complement repeat cluster of the α 2M receptor.

100. (New) The method of claim 31, wherein the α 2M receptor fragment comprises the p80 fragment of the α 2M receptor.

101. (New) The method of claim 31, wherein the compound is a peptide consisting of amino acids selected from the group consisting of: SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, and SEQ ID NO:57.

102. (New) The method of claim 31, wherein the compound is an antibody.

103. (New) The method of claim 31, wherein the compound is an alpha (2) macroglobulin fragment.

104. (New) The method of claim 31, wherein the compound is an alpha (2) macroglobulin receptor fragment.

105. (New) The method of claim 71, wherein the compound is an antibody.

106. (New) The method of claim 71, wherein the compound is an alpha (2) macroglobulin fragment.

107. (New) The method of claim 31, wherein the heat shock protein is calreticulin.

108. (New): The method of any one of claims 80, 81, 82 or 107 wherein the compound is an antibody specific for the alpha (2) macroglobulin receptor.

109. (New): The method of any one of claims 80, 81, 82 or 107 wherein the compound is an antibody specific for the heat shock protein.

110. (New): The method of claim 31 or 71, wherein the immune response is an autoimmune response directed at tissues or organs transplanted in said human.

111. (New) The method of claim 103 wherein the compound is an α 2M fragment comprising at least ten consecutive amino acids of α 2M (SEQ ID NO:4).

112. (New) The method of claim 31, 71, or 103 wherein the compound is an α 2M fragment comprising at least ten consecutive amino acids of α 2M (SEQ ID NO:4).

113. (New) The method of claim 103 or 106, wherein the compound is a peptide consisting of amino acids selected from the group consisting of: 1299-1451 (SEQ ID NO:8), 1314-1451 (SEQ ID NO:9), 1366-1392 (SEQ ID NO:10), 1300-1425 (SEQ ID NO:11), 1300-1400 (SEQ ID NO:12), 1300-1380 (SEQ ID NO:13), 1325-1425 (SEQ ID NO:14), 1325-1400 (SEQ ID NO:15), 1325-1380 (SEQ ID NO:16), 1350-1425 (SEQ ID NO:17), 1350-1400 (SEQ ID NO:18), and 1350-1380 (SEQ ID NO:19).

114. (New) The method of claim 104, wherein the compound is an α 2M receptor fragment comprising at least five consecutive amino acids of the α 2M receptor (SEQ ID NO.: 7).

115. (New) The method of claim 31 or 104 wherein the compound is an α 2M receptor fragment comprising at least ten consecutive amino acids of the α 2M receptor (SEQ ID NO:7).

116. (New) The method of claim 104, wherein the α 2M receptor fragment comprises at least one complement repeat selected from the group consisting of CR3 to CR10.

117. (New) The method of claim 104, wherein the α 2M receptor fragment comprises a cluster of complement repeats.

118. (New) The method of claim 98, wherein the cluster of complement repeats comprises the CI complement repeat cluster of the α 2M receptor.

119. (New) The method of claim 104, wherein the α 2M receptor fragment comprises the p80 fragment of the α 2M receptor.

120. (New) The method of claim 104, wherein the compound is a peptide consisting of amino acids selected from the group consisting of: SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, and SEQ ID NO:57.

121. (New) The method of claim 80, 81, or 107 wherein the compound is an antibody.